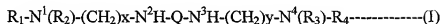


CLAIMS

What is claimed is:

1. An anti-diarrheal or gastrointestinal anti-spasmodic pharmaceutical composition comprising [A] an effective amount of a compound having the formula:



wherein: R_1 , R_2 , R_3 and R_4 may be the same or different and are H, alkyl, cycloalkyl

or aralkyl having from 1 to 12 carbon atoms, or a heterocyclic group

having from 3 to 10 atoms wherein the hetero atom is said N^1 or N^4 ;

Q is a cycloalkyl group having from 3 to 10 carbon atoms;

x is an integer from 3 to 6, inclusive;

and y is an integer from 3 to 6, inclusive;

or (II) a salt thereof with a pharmaceutically acceptable acid; and [B] a pharmaceutically acceptable carrier therefor.

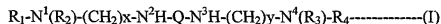
2. A composition according to claim 1 wherein Q is connected either *cis* or *trans* as the (1,2), (1,3), (1,4), (1,5) or (1,6) isomer.
3. A composition according to claim 1 wherein Q is cyclohexyl.
4. A composition according to claim 1 wherein x is 3 and y is 3.

5. A composition according to claim 1 wherein x is 3, y is 3, R₁ and R₃ are both H and R₂ and R₄ are both ethyl.

6. A composition according to claim 1 wherein Q is cyclohexyl; x and y are 3; R₁ and R₃ are both H, and R₂ and R₄ are both ethyl.

7. A composition according to claim 6 wherein said polyamine is the *trans* (1,4) isomer.

8. A method of treating diarrhea or gastrointestinal spasm in a human or non-human animal in need thereof comprising administering to said animal an effective amount of a compound having the formula:



wherein: R₁, R₂, R₃ and R₄ may be the same or different and are H, alkyl, cycloalkyl or aralkyl having from 1 to 12 carbon atoms, or a heterocyclic group

having from 3 to 10 atoms wherein the hetero atom is said N¹ or N⁴;

Q is a cycloalkyl group having from 3 to 10 carbon atoms;

x is an integer from 3 to 6, inclusive;

and y is an integer from 3 to 6, inclusive;

or (II) a salt thereof with a pharmaceutically acceptable acid.

9. A method according to claim 8 wherein Q is connected either *cis* or *trans* as the (1,2), (1,3), (1,4), (1,5) or (1,6) isomer.

10. A method according to claim 8 wherein Q is cyclohexyl.

11. A method according to claim 8 wherein x is 3 and y is 3.

12. A method according to claim 8 wherein x is 3, y is 3, R₁ and R₃ are both H and R₂ and R₄ are both ethyl.

13. A method according to claim 8 wherein Q is cyclohexyl; x and y are 3; R₁ and R₃ are both H, and R₂ and R₄ are both ethyl.

14. A method according to claim 13 wherein said polyamine is the *trans* (1,4) isomer.